DOCUMENT RESUME

ED 044 668 AL 002 641

AUTHOR	Channessian, Sirarpi; And Others
TITLE	Conference on Navajo Orthography.
INSTITUTION	Center for Applied Linguistics, Washington, D.C. English for Speakers of Other Languages Program.
SPONS AGENCY	Bureau of Indian Affairs (Dept. of Interior), Washington, D.C.
PUB DATE	Jun 69
NOTE	18p.; Report of Conference on Navajo Orthography, Albuquerque, New Mexico, May 2-3, 1969
EDRS PRICE	EDRS Price MF-$0.25 HC-$1.00
DESCRIPTORS	Bilingual Education, Conference Reports, Early Childhood Education, *Navaho, *Orthographic Symbols, Phonemic Alphabets, Spelling, Teacher Education, *Writing

ABSTRACT

This report on the Conference on Navajo Orthography, held in Albuquerque, New Mexico on May 2-3, 1969 constitutes a summary of the discussion and decisions of a meeting which was convened by the Center for Applied Linguistics under contract with the Bureau of Indian Affairs to agree on an orthography for the Navajo language. The immediate purpose of such an orthography is its adoption for uniform use in Bureau of Indian Affairs sponsored publications for use in its school system, but the Conference hopes it would have wider acceptance. The present report covers considerations in formulating the recommendations, presents the recommended script, and discusses the purposes to be served by a Navajo writing system. Appended are a listing of various Navajo alphabets compiled by Oswald Werner, and notes by Sarah C. Gudschinsky on orthography preparation and revision. (AMM)

ED 044668

U.S. DEPARTMENT OF HEALTH, EDUCATION
& WELFARE
OFFICE OF EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL OFFICE OF EDUCATION POSITION OR POLICY.

CONFERENCE ON NAVAJO ORTHOGRAPHY

Albuquerque, New Mexico
May 2-3, 1969

AL 002 641

CENTER FOR APPLIED LINGUISTICS
ENGLISH FOR SPEAKERS OF OTHER LANGUAGES PROGRAM
1717 Massachusetts Avenue, N.W.
Washington, D.C. 20036

June 1969

Prepared under Contract with
THE BUREAU OF INDIAN AFFAIRS
DEPARTMENT OF THE INTERIOR

PREFACE

Conference on Navajo Orthography, Albuquerque, New Mexico, May 2-3, 1969 constitutes a summary of the discussion and decisions of a meeting which was convened by the Center for Applied Linguistics under contract with the Bureau of Indian Affairs to agree on an orthography for the Navajo language. The immediate purpose of such an orthography is its adoption for uniform use in BIA sponsored publications for use in its school system, but the conference hopes it would have wider acceptance.

A draft version of this report was submitted to the participants at the conference for their comments and criticisms before this final version was prepared.

The Center wishes to extend its thanks to all participants at the conference, especially those who prepared discussion papers and members of the Navajo community who brought to the conference the benefit of their knowledge of the Navajo language and their experience in Navajo literacy projects. The Center also wishes to extend its thanks to the Bureau of Indian Affairs for its support of the project.

Sirarpi Ohannessian
Director, English for Speakers of
Other Languages Program

CONFERENCE ON NAVAJO ORTHOGRAPHY
Albuquerque, New Mexico
May 2-3, 1969

Introduction

In October 1968 the Center for Applied Linguistics (CAL) convened a conference for the Bureau of Indian Affairs (BIA) of the U.S. Department of the Interior in preparation for the institution of bilingual kindergartens for Navajo children. The purpose of the conference was to consider the adaptation of curriculum content at the kindergarten level to a Navajo setting with special reference to the use of the Navajo language for kindergarten activities. The conference was also concerned with the teaching of oral English as a component of the program and the training of teachers for bilingual kindergartens.

Recommendation 4 in the report of this conference entitled Planning Conference for a Bilingual Kindergarten Program for Navajo Children, Conclusions and Recommendations, October 11-12, 1968 reads:

> 4. Since written material in Navajo will be necessary both for purposes of curriculum development and teacher training, the conference recommends that the BIA appoint a small committee of linguists and qualified Indian educators to agree on an orthography that may be adopted for use in the BIA educational system. The conference suggests that existing scripts in which a sizeable amount of literature exists be considered for adoption or adaptation.

As implementation of this recommendation the BIA commissioned the Center for Applied Linguistics to bring together a group of Indian educators, linguists, anthropologists and people involved in literacy to agree on an orthography for the Navajo language for use in the BIA educational system. The meeting took place on May 2 and 3, 1969, in Albuquerque, New Mexico.

Consultants and other participants included representatives of the BIA, the Education Committee of the Navajo Tribal Council, anthropologists, linguists, workers in Navajo literacy projects and teachers. Many of the participants were members of the Navajo community. The following is a list of those who attended the conference:

Kenneth Y. Begishe, Tsegi Trading Post, Tonalea, Arizona

Eva Benally, Rough Rock Demonstration School, Chinle, Arizona

Timothy Benally, Navajo Tribal Education Committee, Window Rock, Arizona

Herbert Blatchford, Callup Indian Community Center, Inc., Gallup, New Mexico

ElWanda Brinkley, BIA, Washington, D.C.

William W. Gage, CAL, Washington, D.C.

Irvy W. Goossen, Northern Arizona University, Flagstaff, Arizona

Sarah C. Gudschinsky, Summer Institute of Linguistics, Santa Ana, California

Wayne Holm, Rock Point Boarding School, Chinle, Arizona

Tom R. Hopkins, BIA, Washington, D.C.

Roy Husky, Navajo Tribal Council, Window Rock, Arizona

George Lee, Rough Rock Demonstration School, Chinle, Arizona

William Morgan, Sr., Navaho Community College, Many Farms, Arizona

Sirarpi Ohannessian, CAL, Washington, D.C., Chairman

Dorothy A. Pedtke, CAL, Washington, D.C.

Anita Pfeiffer, Rough Rock Demonstration School, Chinle, Arizona

Wm. Desmond Phillips, BIA, Washington, D.C.

Paul Platero, Navaho Community College, Many Farms, Arizona

Mary E. Ross, BIA, Window Rock, Arizona

Faralie S. Spell, BIA, Window Rock, Arizona

Bernard Spolsky, University of New Mexico, Albuquerque, New Mexico

Laura Wallace, Rough Rock Demonstration School, Chinle, Arizona

Oswald Werner, Northwestern University, Evanston, Illinois

Shirley Witt, Gallup Indian Community Center, Inc., Gallup, New Mexico

Robert W. Young, BIA, Albuquerque, New Mexico

In preparation for the conference the following consultants had submitted brief statements on the orthography they favored for Navajo: Kenneth Y. Begishe, Herbert Blatchford, Irvy W. Goossen, Wayne Holm, William Morgan, Sr. and Robert W. Young. Oswald Werner

had prepared a conversion table of different conventions for writing Navajo.[1] These documents were distributed to consultants prior to the meeting and formed the basis of the discussions at the meeting.

On the morning of the first day the conference discussed the purposes that a Navajo writing system would serve in the BIA school system, in the Navajo community and outside these. In the afternoon discussions, based on a statement by Sarah C. Gudschinsky[2], the conference considered desirable characteristics in a writing system for Navajo that would serve these purposes. After this each of the consultants who had prepared a statement on a Navajo orthography commented on his in further detail and answered questions, and discussed various problems. A comparative presentation of existing writing systems was presented by Dr. Werner on the second day. The system which was finally adopted was essentially the Young and Morgan or the "Government System" with minor modifications arrived at in the light of the preceding discussions and presentations. (A considerable amount of literature already exists in this system.)

I. Considerations in Formulating the Recommendations

During the discussions that preceded the recommendations on a Navajo orthography, a number of points were raised concerning general policy in making decisions. A brief account of each and the conclusions reached are given below:

1. The orthography on which the conference was asked to decide was intended primarily for the needs of Navajo schools in the care of the BIA, especially for publications for these schools. Since some measure of consistency is desirable in pedagogical materials, it was agreed that uniformity in such matters as the use of symbols, capitalization, etc. should be maintained in published materials. However, it was clearly stated that no rigid uniformity was being advocated for private work or for handwriting. The conference throughout the discussion was very firm in its stand for flexibility in such matters as shapes of letters, patterns of spelling and punctuation, so long as preferences in such things did not conflict with the general uniformity of published texts.

---

[1] See Appendix I.

[2] See Appendix II.

It was also clearly stated by the BIA representatives, and was the hope of the conference in general, that the decisions made at the conference would be given consideration by the Navajo Tribal Council for adoption in their programs as a step towards a more standard writing system in publications in the Navajo language.

2. There was firm agreement that the conference should, in its discussions, bear the native speaker of Navajo in mind as the principal user of the writing system to be adopted. It was realized that there would also be non-Navajo speakers using the writing system but it was pointed out that the needs of these would differ from those of native speakers since non-Navajo speakers would obviously need more guides to pronunciation than native speakers.

3. The question of transfer to and from English orthography was discussed at great length, and there was general agreement that it was one significant element that should be kept in mind, but that problems arising from the spelling system of either language (e.g., confusing 'ee' in Navajo with the vowel sound in English 'need') should not be one of the major considerations in making decisions on Navajo orthography. It was considered much more important to base the orthography on the facts of the Navajo language itself. Some of the participants who were involved in literacy projects with varying age groups of Navajos said that problems of transfer from the English spelling system into the reading and writing of Navajo were much more pronounced for the adult Navajo learning to read his own language than for the young child. The possibility of negative transfer into the reading of English from having learned to read in Navajo first was not discussed at length, since there was not sufficient experience to substantiate it.

4. In general it was agreed that the orthography should reflect the phonemic structure of Navajo on the basis of one simple or complex symbol for each sound unit. It was realized that in questions of spelling there would be problems, especially on morpho-phonemic matters. It was suggested that when possible a uniform spelling be maintained where pronunciation changes occurred as a result of morphophonemic processes. It was suggested that as the

orthography was used a careful record be kept of problem areas and that psycholinguistic tests be made to determine whether change to a more phonetic spelling made reading easier or not. It was not meant that such testing would have to be done in a laboratory or on an extensive statistical basis, but that it be carried out through the careful work of well-trained, competent specialists observing a variety of subjects ranging in ability, age, and other stated criteria.

NOTE: Standardized spelling for Navajo came up a number of times as many of the consultants described problems encountered in their teaching of reading and writing in Navajo. There was indication that there were regional differences in vocabulary and pronunciation as well as differences in levels of usage. The conference did not, however, feel that a uniform spelling system could be decided on without a dialect study and linguistic survey of the Navajo reservation and community. The general feeling of the conference was that within the limits of a certain amount of flexibility some uniformity of spelling should be adhered to for pedagogical reasons and for making the task of the teacher easier. Those participants who were directly involved in a teaching situation appeared most concerned about the adverse consequences of allowing complete freedom in matters of spelling.

II. The Recommended Script

The following consists of (a) alphabet, (b) prosodic markers. The alphabet includes, beside usual Roman letters, digraph letters, letters with diacritics, and two letters not occurring in the Roman alphabet. It was adopted by the conference, in the order in which it is given, as the most suitable for the purposes of Navajo:

a. Alphabet

a
b
ch
ch'
d
dl

dz
e
g
gh
h
hw
i
j
k
kw
k'
l
ł (ĺ , ł)*
m
n
o
s
sh
t
t'
tł (tĺ , tł)
tł' (tĺ' , tł')
ts
ts'
w
x (only if 'h' ambiguous)
y
z
zh
ʾ , ' (glottal stop)**

b. Prosodic Markers

1. Length is indicated by double letters, e.g., 'aa'.

---

*"Polish barred l" in type fonts

**Choice of symbol applies to glottalization symbol as well.

2. High tone is indicated by '´' above letter, e.g., 'áá', 'ń'. Low tone, including low tone syllabic n, is not indicated.

3. Nazalization is indicated by hook under letter, e.g., 'i̧i̧'.

Some Spelling Conventions Agreed on:

1. The glottal stop will be omitted in word initial position before a vowel.
2. 'w' rather than 'gh' will be used before 'o', and 'y' rather than 'gh' will be used before 'i' and 'e'.
3. Since 'sh' in alphabet indicates the initial sound in 'she', the sound combination s h is written as 'sx' to resolve ambiguity.
4. 'x' (not 'h') is written [in syllable initial consonant clusters] as the "intensifier".

NOTE: See note on page 5.

Punctuation:

There was a considerable amount of discussion on punctuation, such problems as the use of the question mark both before and after a sentence receiving attention. However, it was concluded that the English system of punctuation would be adopted except for the use of angular (French)≪ ≫ quotation marks in order to avoid confusion with the symbol adopted for the glottal stop or glottalization.

Names for the Characters in the Alphabet:

There was considerable discussion on names for the alphabet, but it was finally decided that although it might be desirable to devise special names for purposes of referring to the symbols and for making it easy to establish their order for such things as dictionary use, there was not sufficient time during the present meeting to do this. The following tentative conclusions were reached:

a. The vowels should be referred to by their "Navajo names", that is, sounded.

b. The consonants should be referred to by their English names.

c. The tone mark and the nasalization hook could be referred to either in English or in Navajo.

III. Purposes to be Served by a Navajo Writing System

A large proportion of the time of the conference was devoted to an assessment of the purposes that a Navajo writing system would serve and the desirable characteristics of such a writing system.[3] The following pages give a brief account of the discussions on the present uses and projected purposes for a Navajo writing system.

1. The purpose for a writing system that received most attention in the discussions was that of initial literacy in Navajo for children in the early grades of elementary school. Reference was made to Recommendation B3 in The Study of the Problems of Teaching English to American Indians[4] which stated that there was reason to believe that Indian children might have fewer problems in reading in English if they first learned to read in their mother tongue. Work done by Modiano[5] and others seemed to strengthen this argument. One participant who had experience in a project in Latin America where Indian children had learned to read in Mazatec first (instead of Spanish) was most firm in her conviction of the importance of teaching Navajo children to read in their own language first.

The conference suggested that pre-reading instruction in preparation for reading in Navajo should be started in all kindergartens for Navajo-speaking children. It was further suggested that a reading program should also be started where children showed sufficient readiness for it in these kindergartens.

---

[3]These characteristics were discussed briefly under Section I of this report.

[4]Sirarpi Ohannessian, ed., The Study of the Problems of Teaching English to American Indians, Washington, D.C.: Center for Applied Linguistics, 1967, pp. 30-31.

[5]Nancy Modiano, "National or Mother Language in Beginning Reading: A Comparative Study," Research in Teaching of English 1:32-43 (1968).

The conference in general agreed that all reading for Navajo-speaking children should be started in the mother tongue. It was generally held that initial literacy in Navajo would improve the education and educational potential of young Indian children since it would enable them to read in a language they could understand from the very beginning, and thus make the later transition to further education through the medium of English easier and more meaningful.

2. The gradual development of a standard Navajo language as the vehicle of instruction in education of Navajos was another purpose that would be served by the establishment of a uniform writing system. Such a standard language, through which the content subjects could be taught, would greatly help the development of bilingual education for Navajos not only at the early elementary level but at higher levels of education.

The concerns of the Planning Conference for a Bilingual Kindergarten Program for Navajo Children (CAL, 1969), pp. 10-11, regarding the training of teachers through the Navajo language for a bilingual kindergarten in which Navajo would serve as a medium of instruction were discussed at some length. The present conference felt that at the moment there was neither an extensive enough terminology for such a purpose, nor sufficiently trained personnel. However, it was brought out that from modest beginnings in the development of curriculum material in Navajo for the kindergarten level there would gradually grow a body of material that would eventually be adequate for education through the medium of Navajo at higher levels in the educational system as well as for the training of teachers.

One particular aspect in education for which a Navajo writing system would have implications was the administration of tests and questionnaires. It was felt that the present system of rendering into Navajo items from an English language questionnaire did not adequately reflect the meaning of such items as those involved in IQ testing, for example.

3. Another purpose that received considerable attention was literacy at the adult level. Members of the Rough Rock School present at the conference affirmed that parents were very much interested in learning to read Navajo themselves, and had expressed interest in learning to read English as well. It was suggested that diglot texts, provided they covered areas of interest to adults, would help literacy in both English and Navajo.

Literacy for adults in Navajo seemed desirable from the following points of view:

a. It would provide access to practical information in such areas as agriculture, sheep-raising, driver education, social security benefits, medicare, banking and so on.

b. It would help Navajos to identify with their own culture. It was pointed out that such identification would greatly help Navajos to adjust to modern situations. For this purpose it was suggested that materials on such topics as Navajo history, culture, tribal government, reservation geography and potential development be prepared in Navajo for the use of the adult community.

c. Adult literacy would facilitate parental involvement in the education of their children. It was also pointed out that the reverse of this could also be true -- that children would interpret for and help parents in learning to read.

d. Adult literacy would also be of great use in the everyday affairs of the Navajo community. Such use included correspondence between speakers of Navajo. (Apparently at present a great deal of use is made of the telephone, with the dialing of appropriate numbers being learned to help this process.) It would also encourage the production of newspapers and other periodical literature in Navajo. The suggestion was made that the present Navajo Times published in English contain a Navajo section for young school children. A Navajo writing system widely used by the community would also be useful for police and court records, and for purposes of testimony in court.

The conference strongly recommended that a mass literacy program be launched for teaching adult Navajos to read their own language.

Prepared by
Sirarpi Ohannessian
English for Speakers of Other Languages Program
Center for Applied Linguistics

APPENDIX I

Prepared by Oswald Werner

Navajo Alphabets

Conversion Table of the Different Conventions for Writing Navajo

List of Abbreviations:

Transcript used by OW and staff	OW
Computerized transcription	COMP
Computerized adapted for typing	TYPE
Elementary, cuts down on diacritics	EL
Young and Morgan	Y&M
Hoijer 1945 and Haile	H&H
Gladys Reichard	GR
God Bizaad	GB

	OW	COMP	TYPE	EL	Y&M	H&H	GR	GB
Vowels	i	I	i	i	i	i	i	i
	e	E	e	e	e	e	e	e
	o	O	o	o	o	o	o	o
	a	A	a	a	a	a	a	a
Length	vv	VV	vv	vv	vv	v.	v.	vv
Tone	v́	V7	v7	v/ (1	v́	v́	v́	v́
Nasal	v̨ (2	8V	8v	v̨	v̨	v̨	v̨	v̨
Length Tonal & Nasal	v́v́ c c	8V7V7	8v7v7	v̨/v̨/	v́v́	v́.	v́.	v́v́
Glides	v́v	V7V	v7v	v/v	v́v	v̂.	v̂.	v́v
	vv́	VV7	vv7	vv/	vv́	v̌.	v̌.	vv́
Consonants	b	B	b	b	b	b	b	b
	t	T	t	t	t	t	t	t
	ts	TS	ts	ts	ts	c	ts	ts
	ch	CH	ch	ch	ch	č	tc	ch
	tl (3	TL	tl	tl	tɬ	ƛ	tɬ	tɬ
	k	K	k	k	k	k	k	k
	k	KW	kw	kw	kw	k^w	kw	kw
	'	'	'	'	'	?	'	'
	d	D	d	d	d	d	d	d

(1. '/' slash mark on typewriter
(2. lower case 'c' under vowel for ch{{{th nose
(3. tl vs tɬ and deletion of initial glottal stop are only changes from YM.

	OW	COMP	TYPE	EL	Y&M	H&H	GR	GB
	d	DZ	dz	dz	dz	z,	dz	dz
	j	J	j	j	j	z,	dj	j
	dl	DL	dl	dl	dl	ɬ	dl	dl
	g	G	g	g	g	g	g	g
	t'	T'	t'	t'	t'	t'	t'	t'
	ts'	TS'	ts'	ts'	ts'	c'	ts'	ts'
	ch'	CH'	ch'	ch'	ch'	č'	tc'	ch'
	tl'	TL'	tl'	tl'	tɬ'	ƛ'	tɬ'	tɬ'
	s	S	s	s	s	s	s	s
	sh	SH	sh	sh	sh	š	c	sh
	ɬ	LH	lh	ɬ	ɬ	ɬ	ɬ	ɬ
	h(x) (4	H	h(x) (4	h(x)	h(x)	h_x	h	h(x) (4
	hw	HW	hw	hw	hw	$h^w_{x^w}$	h^w	hw
	z	Z	z	z	z	z	z	z
	zh	ZH	zh	zh	zh	ž	zh	zh
	l	L	l	l	l	l	l	l
	gh	GH	gh	gh	gh	ɣ	ɣ	gh
	ghw(rare)	GHW(rare)			ghw	$ɣ^w$	$ɣ^w$	
	m	M	m	m	m	m	m	m
	n	N	n	n	n	n	n	n
Semi-vowels	w	W	w	w	w	w	w	w (5
	y(gh)	Y(GH)	y(gh)	y	y(gh)	y (or gh)	y	y (6
Syllabics	ń	N6	n6	n/	ń	ń	ń	ń
	ǹ	N9	n9	n	ǹ	ǹ	ǹ	n
Glottalized semi-vowels & nasal	'y	'Y	'y	'y	'y	'y	'y	'y
	'n	'N	'n	'n	'n	'n	'n	'n
	'w	'W	'w	'w	'w	'w	'w	'w

(4. x used after /s,c/ to avoid ambiguity and in the 'pejorative' velar fricative off glide.
(5. for w and [ghw] or /gh/ before /o/
(6. for y and [ghy] or /gh/ before /i/ and /e/

Alphabetic order (shown on elementary alphabet):
a b ch ch' d dl dz e g gh h hw i j k kw k' l ɬ m n o s sh t t'
tl tl' ts ts' w x y z zh ' / c

APPENDIX II

Prepared by Sarah C. Gudschinsky

Notes on Orthography Preparation and Revision

INTRODUCTION

Unfortunately the problem of orthography is one of the most explosive in the world. Differences about alphabets have frequently caused shooting wars, riots, and serious political division. In some languages, competing groups using different orthographies have actually perpetrated large competing literatures. In the light of all this, it seems important that major revision of an orthography be undertaken only if there are severe problems with its readability, or if social opposition to it makes it unusable.

Basic Principles

There are a very few basic principles that are important in constructing or revising an orthography. First, and most important, it should be readable. There should be a minimum of ambiguity. The readability of any orthography should be tested by having people read it; there is no abstract theoretical principle that will predict readability.

To be used, however, an orthography must also be socially acceptable. If the people reject the orthography of their own language, the potential readability of that orthography will not help it. Social antagonism from bilinguals, people of status outside the linguistic community, or government agencies may keep a really good orthography from being used. It should be repeated, however, that there is no point in modifying an orthography so much that it cannot be read.

Where all or most of the speakers of a language must learn a second language, transition value becomes important. Does a given orthography help or hinder the reader in making the transition to a second language? Actually the transition value of orthographies has never been researched. It has sometimes been assumed that using the letters of the major alphabet which represent sounds most closely approximating the sounds of the minority language will increase the transition value of the minority

alphabet. It has also been assumed that where allophones in the minority language are equatable with separate phonemes in the majority language, the allophones should be written with the symbols of the majority language. Neither of these assumptions has ever been properly tested. It is quite probable that the contrary is true; equating the letters of the majority language with the phonemes of the minority language may actually make it more difficult for the speaker of the minority language to learn properly the phonemes of the second language. Similarly, using different symbols for allophones may effectively immunize the reader against ever hearing these sounds as separate phonemes. Probably the greatest transition value comes from simply learning what reading is, and to expect different spellings to equate with different pronunciations.

Of course, an orthography should be <u>practical</u> in terms of typewriters and linotypes. This should not be a primary consideration, however. The readability of an orthography is far more important than the cost of adding a key to a typewriter or linotype.

It has been widely assumed that an ideal orthography is a <u>phonemic</u> orthography with one symbol for each phoneme. This is seldom practical, however: a) Phonemes of intonation and emphasis are usually quite adequately symbolized by punctuation. b) Languages with more phonemes than there are letters in the alphabet use digraphs or diacritics to make the extra symbols (e.g., the Navajo ł, gh, á).

In the discussion so far, we have been talking about an orthography for the native speakers of the language. A quite different orthography is needed for foreigners learning the language. The native speaker needs separate symbols only for the sounds which make a difference in his language; he will pronounce them correctly because it is his language. The outsider who is learning the language, however, needs a phonetic orthography which tells him how the words are to be pronounced. It is important that these two orthographies be kept distinct.

The phonetic orthography which helps the pronunciation of the language learner would only complicate the reading process for those who already speak the language.

SPELLING OF INDIVIDUAL WORDS

Even after the letters have been chosen for an orthography, there may remain some problems of spelling. In the case of morphemes which change in different environments, is it better to spell them always with the same basic spelling? (e.g., in English the morpheme which marks plural on nouns is usually spelled s or es even when it is pronounced as z or ez: cats, dogs, houses.) In any language there should be testing to discover which way of writing is easier to read. There is no general rule which fits all languages.

Dialect differences within the language may also make spelling problems. Any one publication should probably be consistent in its choice of dialect forms, and therefore of spelling. In teaching reading, words which have considerable dialect variation should be avoided in the early lessons. Later lessons might use the divergent dialect spellings to indicate the region from which characters in the story came. In any case, there should be considerable flexibility in the spelling variations allowed to the pupils who are learning to write. They should not be penalized for using a spelling which matches their own pronunciation.